

ABSTRACT

An interferometric measuring device for recording the shape, the roughness or the clearance distance of the surface of a measured object is provided, the measuring device having a 5 modulating interferometer, to which is supplied short-coherent radiation by a radiation source, and which has a first beam splitter for splitting the radiation supplied into a first beam component guided via a first arm, and into a second beam component guided via a second arm. One beam is shifted with 10 respect to the other beam, with the aid of a modulating device, in terms of the beam's light phase or light frequency, and passes through a delay line. The two beams are subsequently combined at an additional beam splitter of the modulating interferometer. A measuring probe that is 15 spatially separated from the modulating interferometer is coupled to it or able to be coupled to it via a light-conducting fiber set-up, in which probe the combined beam components are split into a measuring beam guided to the surface by a probe-optical fiber unit having a slantwise exit 20 surface on the object side and a reference beam. An accurate surface measurement is facilitated by the angle of inclination of the exit surface to the normal of the optical probe axis amounting to at least 46°.

25